



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,940	02/27/2002	Robert Lindsay Osbon	5420	8380

7590 10/05/2004  
Terry T. Moyer  
P.O. Box 1927  
Spartanburg, SC 29304

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

## Application No.

10/083,940

## Applicant(s)

OSBON ET AL.

## Examiner

Norca L. Torres-Velazquez

## Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/23/04 has been entered.

2. Applicant's amendment and arguments filed on 8/23/04 have been fully considered.

Applicants indicate in their response that the broken fiber-to-fiber bonds in the spun-bonded nonwoven fabric, are characteristic of a fabric subjected to an air impingement treatment.

A new rejection is stated herein in which the fiber-to-fiber bonds claimed herein are produced by an air impingement process that will further enhance the properties of the Groitzsch et al. nonwoven fabric.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 7-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over GROTEN et al. (US 5,899,785) in view of DISCHLER (US 4,918,795).

GROTEN et al. discloses a nonwoven lap that may be used as a textile for the fabrication of clothing or clothing linings. The reference also teaches the use of the nonwoven lap in textiles for the fabrication of clothes for domestic and industrial cleaning as well as for clean rooms.

(Column 5, lines 10-26). It is further noted that GROTEN et al. uses the nonwoven lap in clothing materials and the Examiner understands that the teachings of GROTEN do not preclude the use of it in any other application such as a bedding that also requires certain degree of softness and breathability as the one expected in clothing materials that are in close contact with a person. The nonwoven lap of GROTEN is made of continuous filaments, crimped or not, obtained by means of a controlled direct spinning process, with a weight between  $5 \text{ g/m}^2$  and  $600 \text{ g/m}^2$ , and formed of composite filaments with a filament number between 0.3 dTex and 10 dTex, the composite filaments are formed of at least three elementary filaments of at least two different materials. Each elementary filament has a filament number between 0.005 dTex and 2 dTex. (Abstract and Column 2, lines 11-24) The reference teaches making the nonwoven by the process steps of extruding/spinning, cooling and/or drawing [spunbonding], and napping the nonwoven prior to, simultaneously or successively, bonding and consolidating the nonwoven by mechanical means such as intense needle punching, the action of pressurized streams of fluid, thermal means, or chemical means. The composite filaments are at least partially separated into their elementary filaments during the course of the operations of bonding and consolidation. (Column 2, lines 36-48) The reference teaches that the ratio of the cross-sectional area of each elementary filament to the total cross-sectional area of the unitary filament being between 0.5% and 90%. (Column 2, lines 22-24) The reference further teaches that the composite filaments are constituted by different immiscible and/or incompatible polymer materials. Among the polymer materials taught by the reference are: (polyester/polyamide). (Column 2, lines 55-65) In Example 1, the reference teaches the use of polyethylene terephthalate and polyamide 6 at a

Art Unit: 1771

ratio of 60/40. (Col. 5, table and Col. 6, lines 26). Further on Example 3, it teaches the use of polyethylene terephthalate/polyamide 66 materials. (Col. 7, lines 48-49)

Further the reference teaches that the nonwoven lap may, after consolidation, be subjected to a binding or dyeing and finishing treatment of a chemical nature, such as anti-pilling, hydrophilic treatment, or antistatic treatment, or a mechanical nature, such as napping, sanforizing or passing it through a tumbler. (Column 5, lines 1-9) The reference further teaches the importance of good drapeability in the fabric. (Refer to Col. 7, lines 9-12)

While the presently claimed plurality of broken fiber-to-fiber bonds would be expected in the fabric of GROTEN from the use of pressurized streams of fluids during consolidation, these would be further obvious from the teachings of DISCHLER.

DISCHLER teaches a method of treating fabric by directing low pressure air at near-sonic velocity between the fabric and a rigid plate to cause the fabric to vibrate at extremely high rate. This high speed vibration causes sawtooth waves in the fabric to break fiber-to-fiber resin or finish bonds thereby decreasing the bending and shear stiffness to enhance the flexibility, drape and softness of the fabric. (Abstract)

Since both references are directed to producing fabrics with good drapeability, the purpose disclosed by DISCHLER would have been recognized in the pertinent art of GROTEN.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fabric of GROTEN and provide it with an air impingement process that will produce broken fiber-to-fiber bonds motivated by the desire of further enhancing the flexibility, drape and softness of the fabric as disclosed by DISCHLER above.

With regards to the claimed weight-to-Bending Stiffness ratio, it is the Examiner's position that the structural and chemical limitations the claims have been met; therefore the nonwoven must have the claimed weight-to-Bending Stiffness ratio. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical process, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. Further, with regards to the claimed improved performance characteristics, these are also considered to be inherent to the product of GROTEN upon treated by the process of DISCHLER.

Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80

5. Claims 1-5 and 7-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over GROITZSCH et al. (US 6,448,462 B2) in view of DISCHLER (US 4,918,795).

Groitzsch is concerned with the creation of a spunbond nonwoven fabric comprising continuous multicomponent fibers that are at least partially split along their length (abstract and col. 5, lines 53). The fabric exhibits the same improved aesthetic and performance characteristics claimed by applicant (col. 1, lines 31-36). Groitzsch teaches a combination of polyethylene

Art Unit: 1771

terephthalate and nylon 6,6 (col. 5, lines 30-32). The polymers are used in applicant's claimed proportions (col. 5, lines 45-47). Groitzsch teaches a basis weight of 100 g/m<sup>2</sup> (col. 1, lines 43). Groitzsch teaches applicant's claimed moisture vapor transmission rate (col. 3, lines 22).

Groitzsch teaches an optional dye to be added to the fabric (col. 4, lines 5-6). With respect to claims 16-18, Groitzsch teaches a full bath impregnation of dye (col. 3, lines 58-60). This would inherently allow the dye to reach the interior of the fibers and would result in increased uniform dyeing. Moreover, Groitzsch teaches subjecting the web to impingement by high pressure fluid jets (col. 3, lines 16-17). This process opens up the dense fiber-to-fiber construction of the fabric and creates available space, which allows dyes to further penetrate to fibers deep within the treated dyed fabric. With respect to claims 19-29, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2USPQ2d 1647 (1987). The examiner is treating claims 19-29 as intended use claims, which bear no patentable weight, because they do not contain additional structural limitations.

Groitzsch is silent to the presently claimed plurality of broken fiber-to-fiber bonds.

DISCHLER teaches a method of treating fabric by directing low pressure air at near-sonic velocity between the fabric and a rigid plate to cause the fabric to vibrate at extremely high rate. This high-speed vibration causes saw-tooth waves in the fabric to break fiber-to-fiber resin or finish bonds thereby decreasing the bending and shear stiffness to enhance the flexibility, drape and softness of the fabric. (Abstract)

Since both references are directed to producing fabrics with high tactility, the purpose disclosed by DISCHLER would have been recognized in the pertinent art of Groitzsch.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the fabric of Groitzsch and provide it with an air impingement process that will produce broken fiber-to-fiber bonds motivated by the desire of further enhancing the flexibility, drape and softness of the fabric as disclosed by DISCHLER above.

With regards to the claimed weight-to-Bending Stiffness ratio, it is the Examiner's position that the structural and chemical limitations the claims have been met; therefore the nonwoven must have the claimed weight-to-Bending Stiffness ratio. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical process, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. Further, with regards to the claimed improved performance characteristics, these are also considered to be inherent to the product of GROTEN upon treated by the process of DISCHLER. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80.

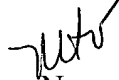


Art Unit: 1771

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Norca L. Torres-Velazquez  
Examiner  
Art Unit 1771

October 1, 2004